

FIG. 1A

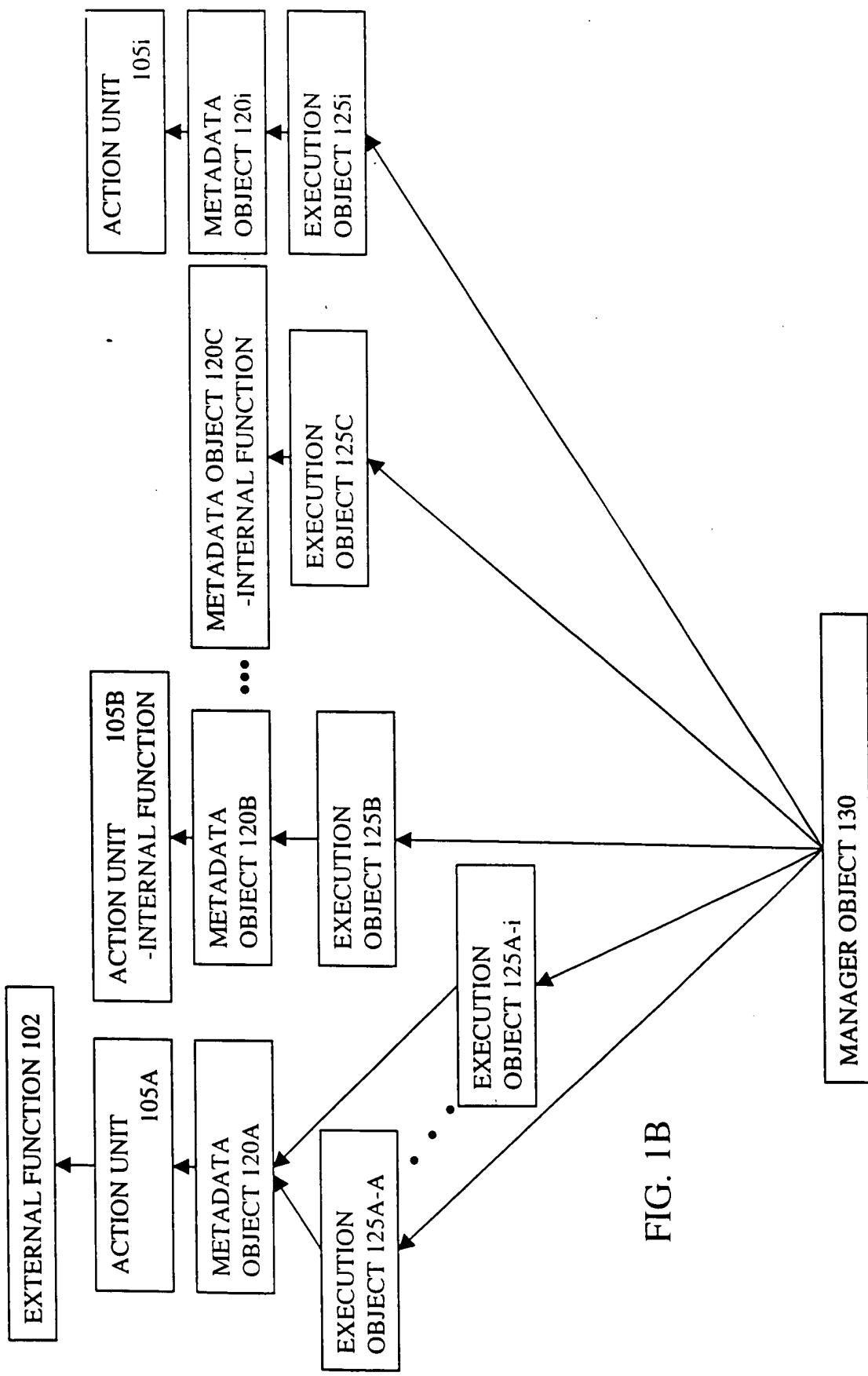


FIG. 1B

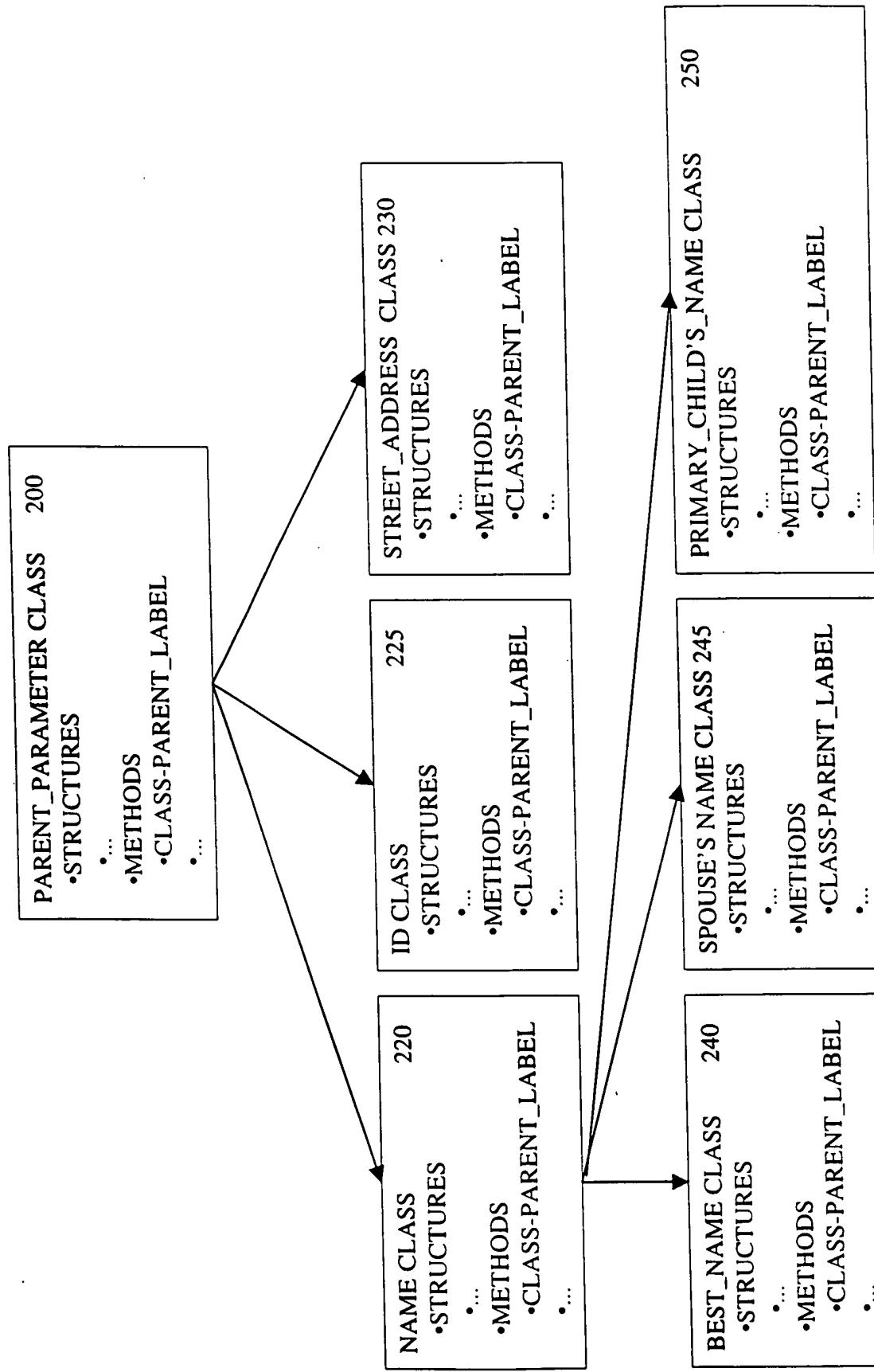


FIG. 2A

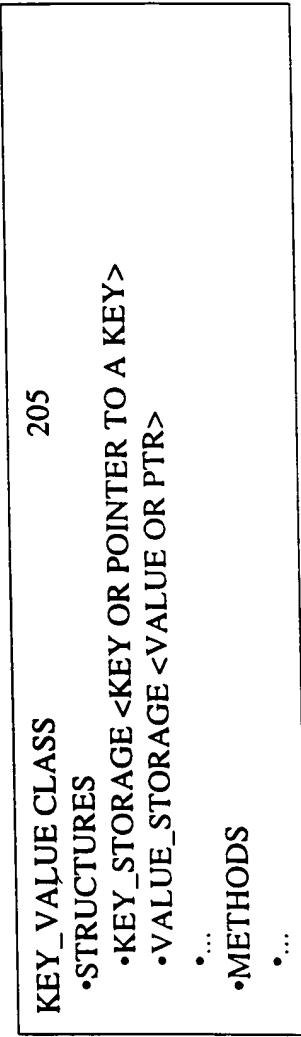


FIG. 2B

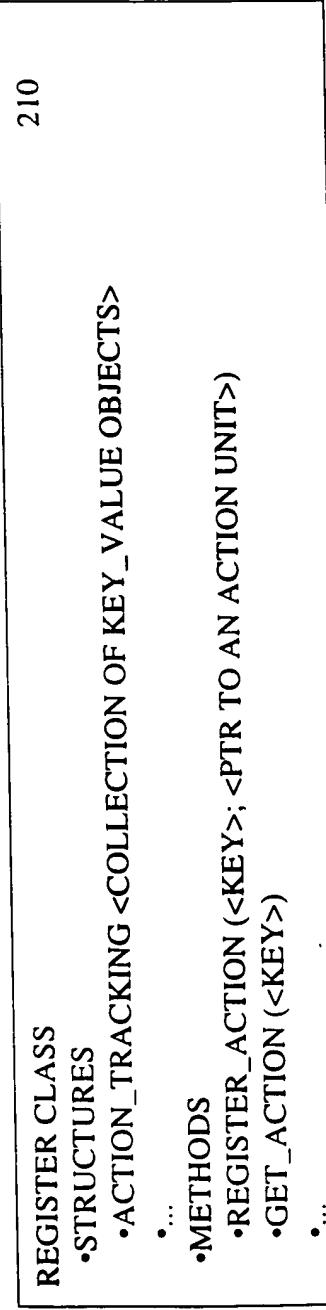


FIG. 2C

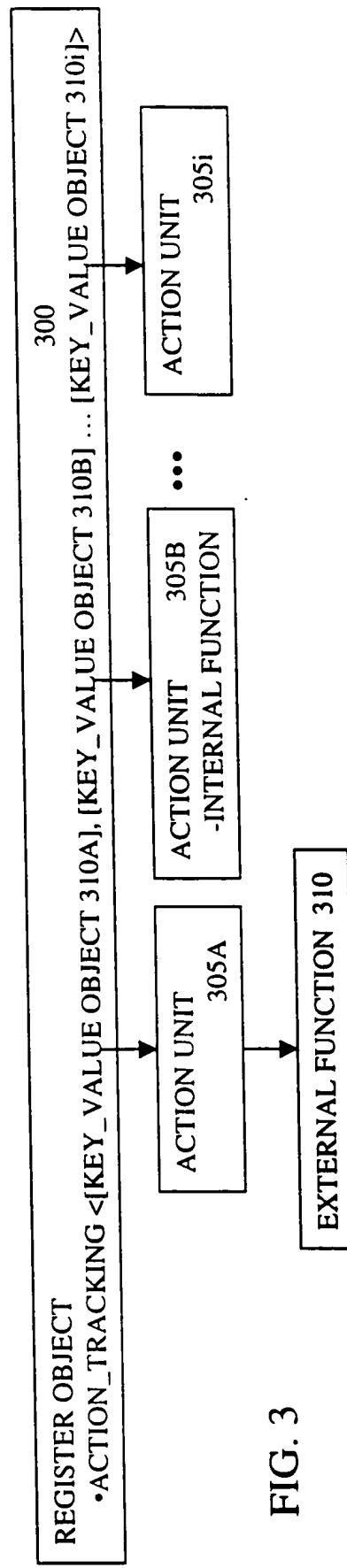


FIG. 3

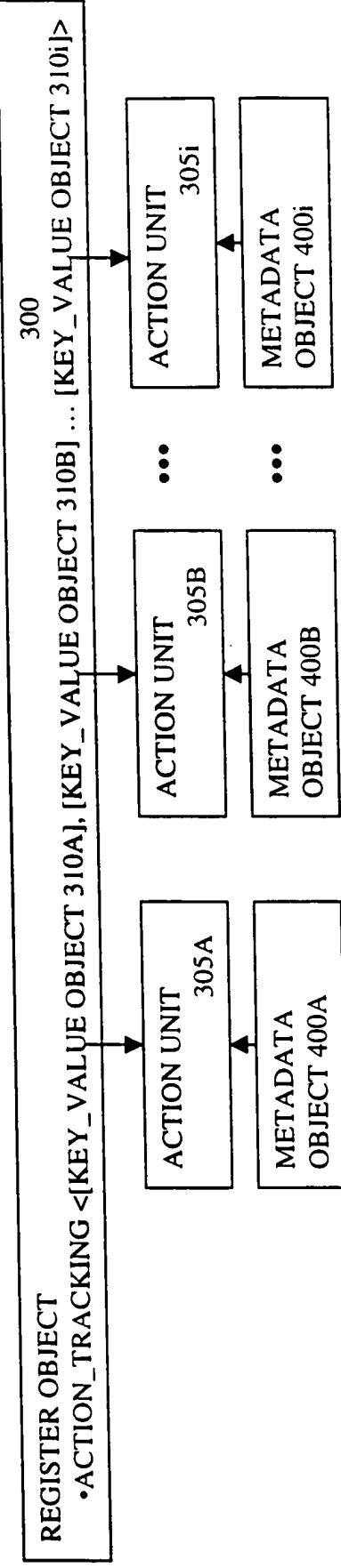


FIG. 4

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500
METADATA CLASS
STRUCTURES
•NAME
•CLASS_LABEL <LABEL INDICATING A METADATA OBJECT>
•INPUTS <COLLECTION OF KEY OBJECTS>
•OUTPUTS <COLLECTION OF KEY OBJECTS>
•ACTION_NAME
•ACTION_PTR <PTR TO ACTION UNIT>
...
•METHODS
•ACTION (<PTR TO CALLING EXECUTION OBJECT>
•CLASS-PARENT_LABEL
...
  
```

FIG. 5

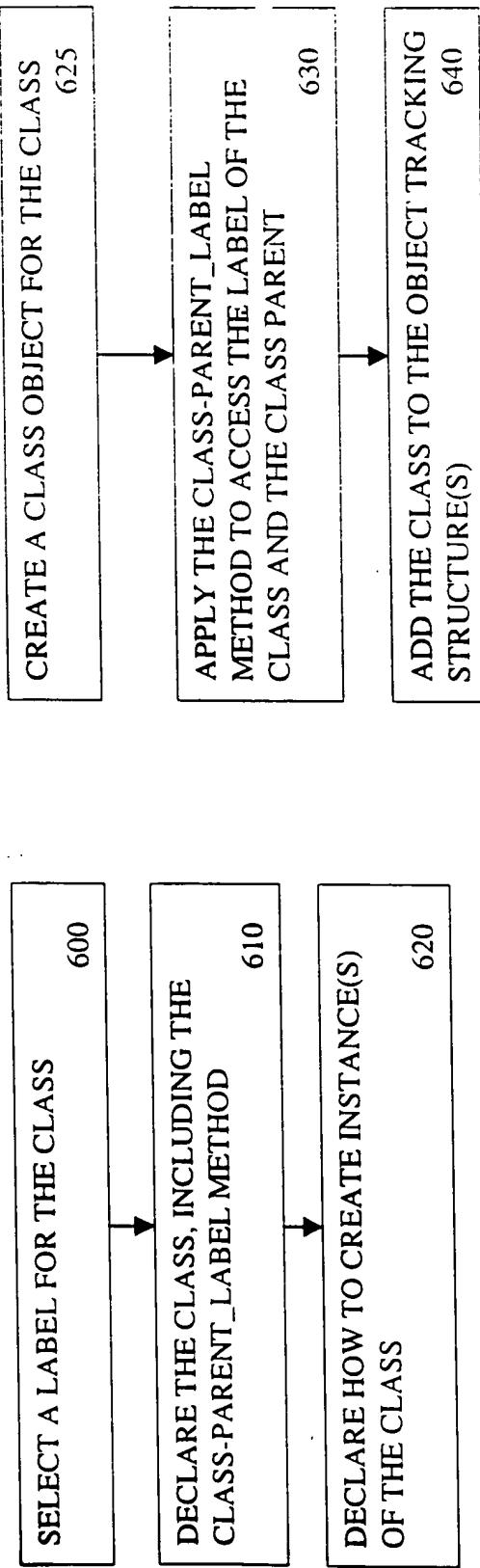


FIG. 6B

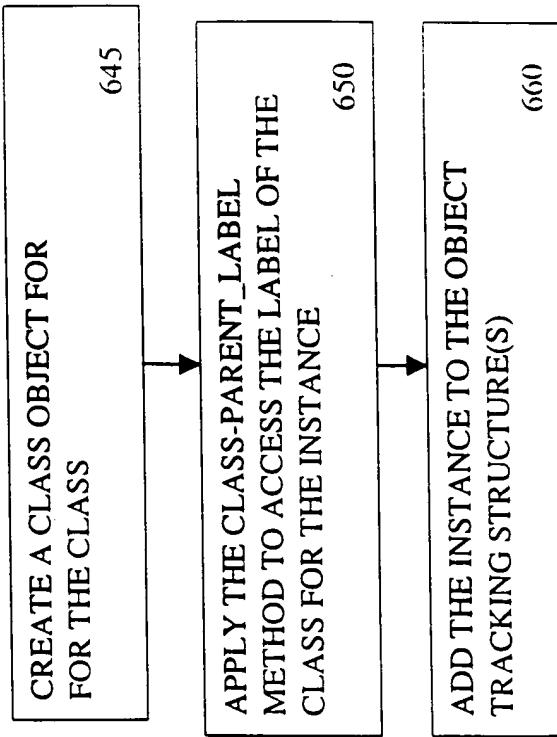


FIG. 6C

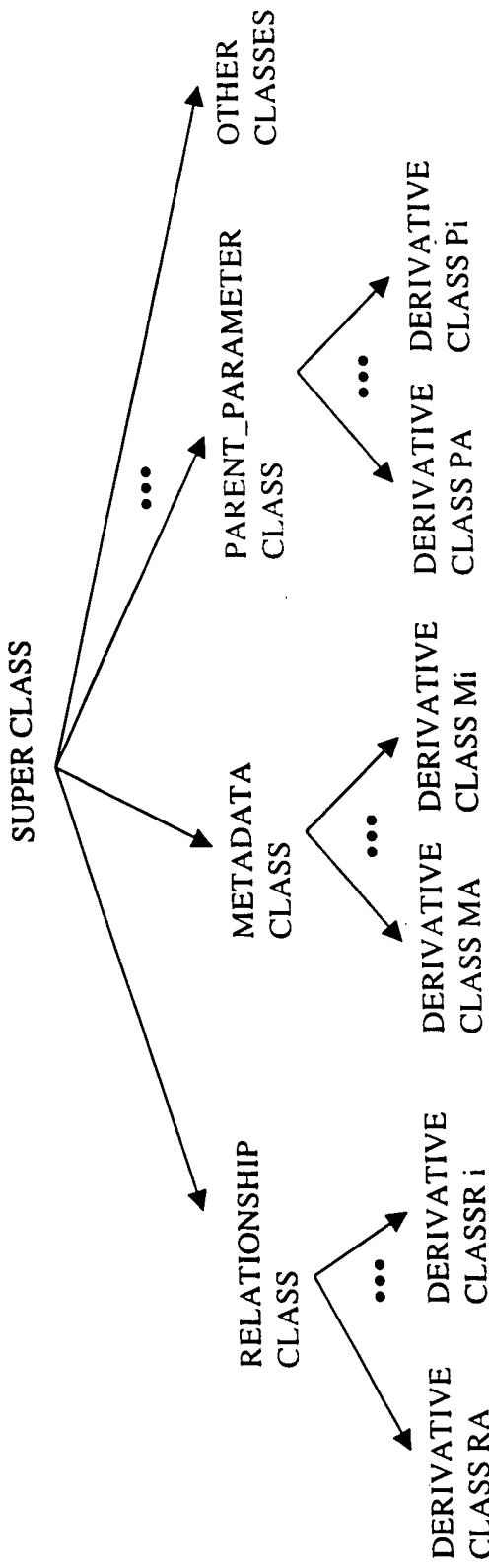


FIG. 7

SUBCLASS LABEL	NAME(S) OF INSTANCE(S)
RELATIONSHIP CLASS	<NAME1>, <NAME2> ...
TRACKING CLASS	
PARENT_PARAMETER CLASS	
DERIVATIVE CLASS PA	
DERIVATIVE CLASS Pi	
.	

FIG. 8

EXECUTION CLASS
•STRUCTURES
•NAME <SAME AS METADATA OBJECT ASSOCIATED WITH>
•CLASS_LABEL <LABEL INDICATING A EXECUTION OBJECT>
•PARAMS <COLLECTION OF KEY_VALUE OBJECTS>
•METADATA_OBJECT_PTR <PTR TO ASSOCIATED METADATA OBJECT>
•MANAGER_PTR <PTR TO MANAGER OBJECT OR NULL>
•...
•METHODS
•SET_PARAM (<KEY>, <VALUE>)
•GET_PARAM (<KEY>; <CONTEXT OBJECT>)
•EXECUTE (<MANAGER OBJECT>; <CONTEXT OBJECT>)
•PARAMETER_SATISFY (<NEED_COLLECTION>; <EXECUTION OBJECT>; <HAVE>)
•...

FIG. 9

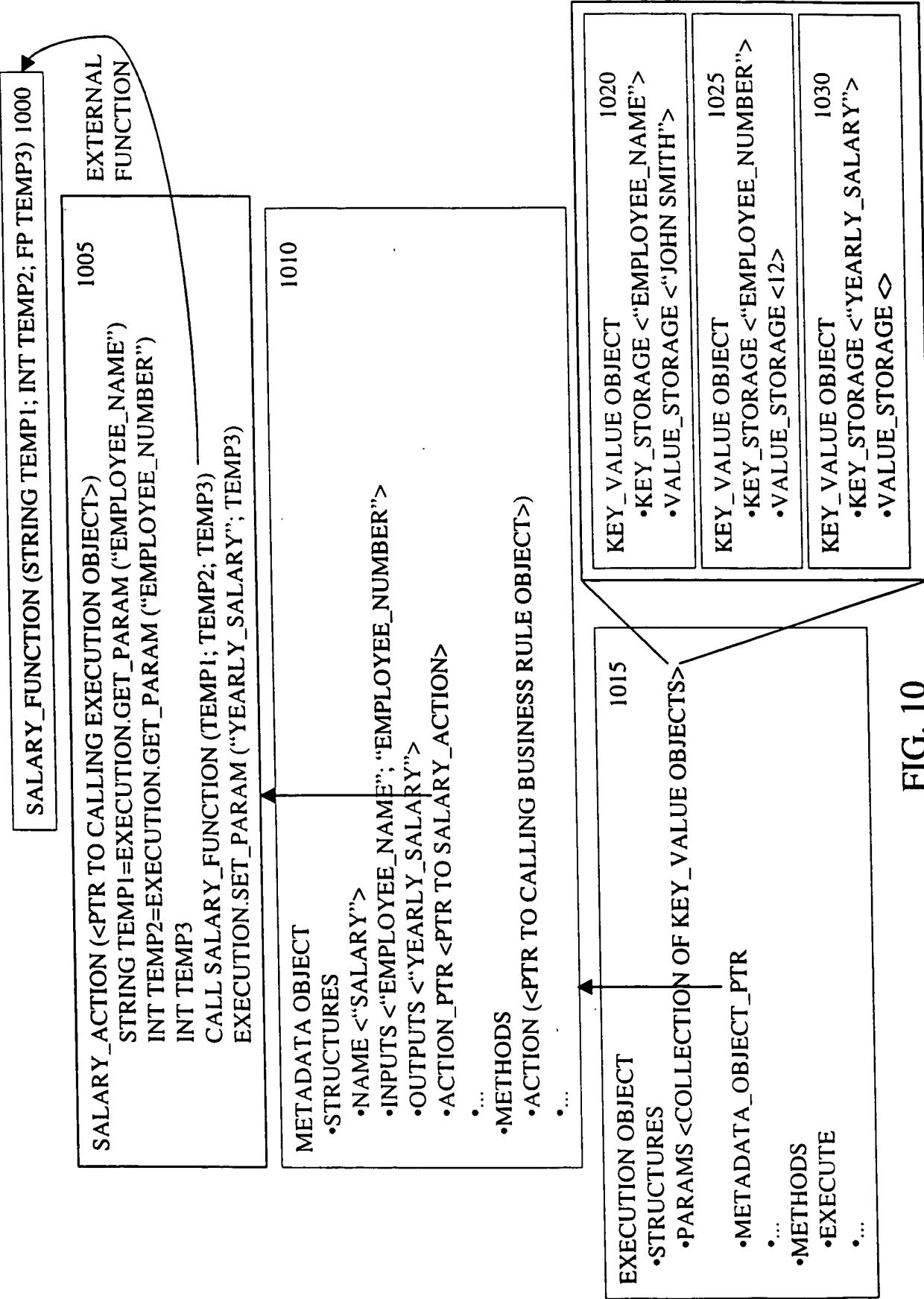


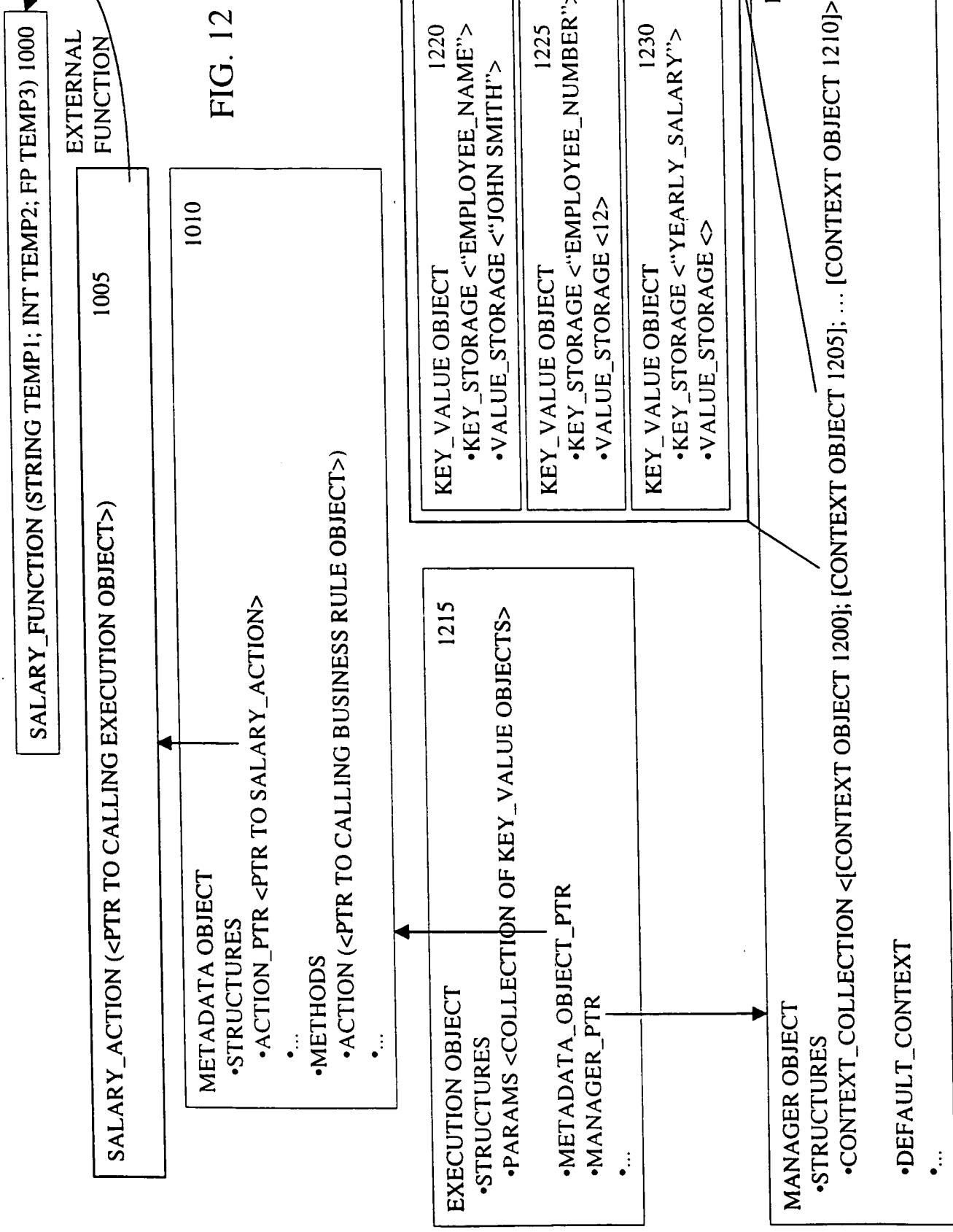
FIG. 10

1100
CONTEXT CLASS
•STRUCTURES
•NAME
•KEY_VALUE_COLLECTION <COLLECTION OF KEY_VALUE OBJECTS>
•EXECUTION_COLLECTION <COLLECTION OF EXECUTION OBJECTS>
•...
•METHODS
•...

FIG. 11A

1110
MANAGER CLASS
•STRUCTURES
•CONTEXT_COLLECTION <COLLECTION OF CONTEXT OBJECTS>
•DEFAULT_CONTEXT <IDENTIFIES ONE OF CONTEXT OBJECTS IN CONTEXT_COLLECTION>
•EXECUTION_COLLECTION <COLLECTION OF EXECUTION OBJECTS MANAGED BY A MANAGER OBJECT>
•EXECUTION_PATH_COLLECTION <ORDERED COLLECTION OF LEVEL OBJECTS>
•...
•METHODS
•NEW_EXECUTION (<NAME OF METADATA OBJECT>; <CONTEXT OBJECT>)
•FIND_BY_NAME (<NAME OF METADATA OBJECT>; <CLASS_LABEL>; <CONTEXT OBJECT>)
•FIND_BY_NEED (<NEED_COLLECTION (E.G., COLLECTION OF PARAMETER KEYS)>; <HAVE (E.G., CONTEXT OBJECT CONTAINING PARAMETERS HAVE VALUES FOR)>)
•FIND_BY_NAME_AND_EXECUTE (<NAME OF METADATA OBJECT>; <CLASS_LABEL>; <CONTEXT OBJECT>)
•FIND_BY_NEED_EXECUTE (<NEED_COLLECTION (E.G., COLLECTION OF PARAMETER KEYS)>; <HAVE (E.G., CONTEXT OBJECT CONTAINING PARAMETERS HAVE VALUES FOR)>)
•...

FIG. 11B



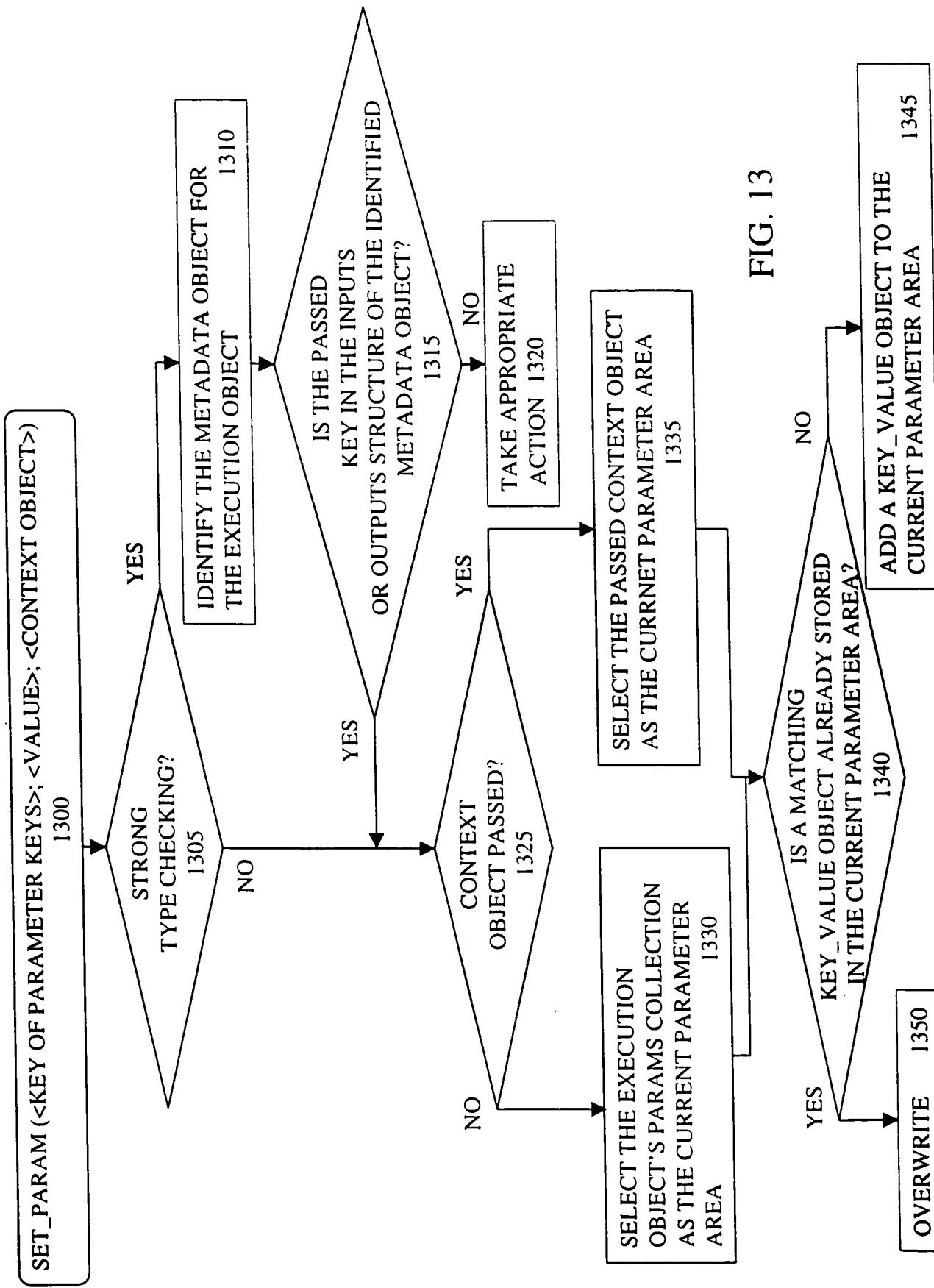


FIGURE 14

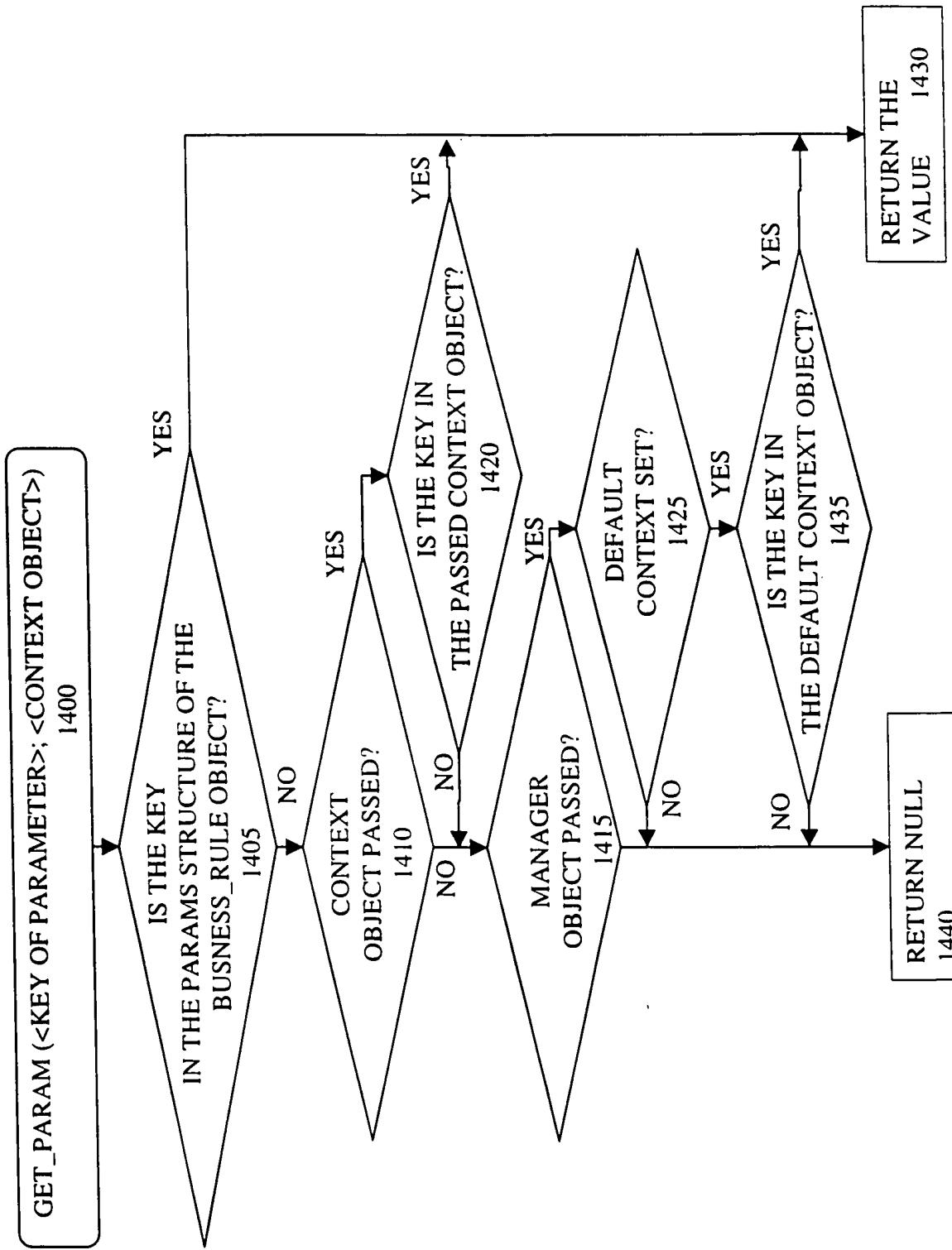


FIG. 14

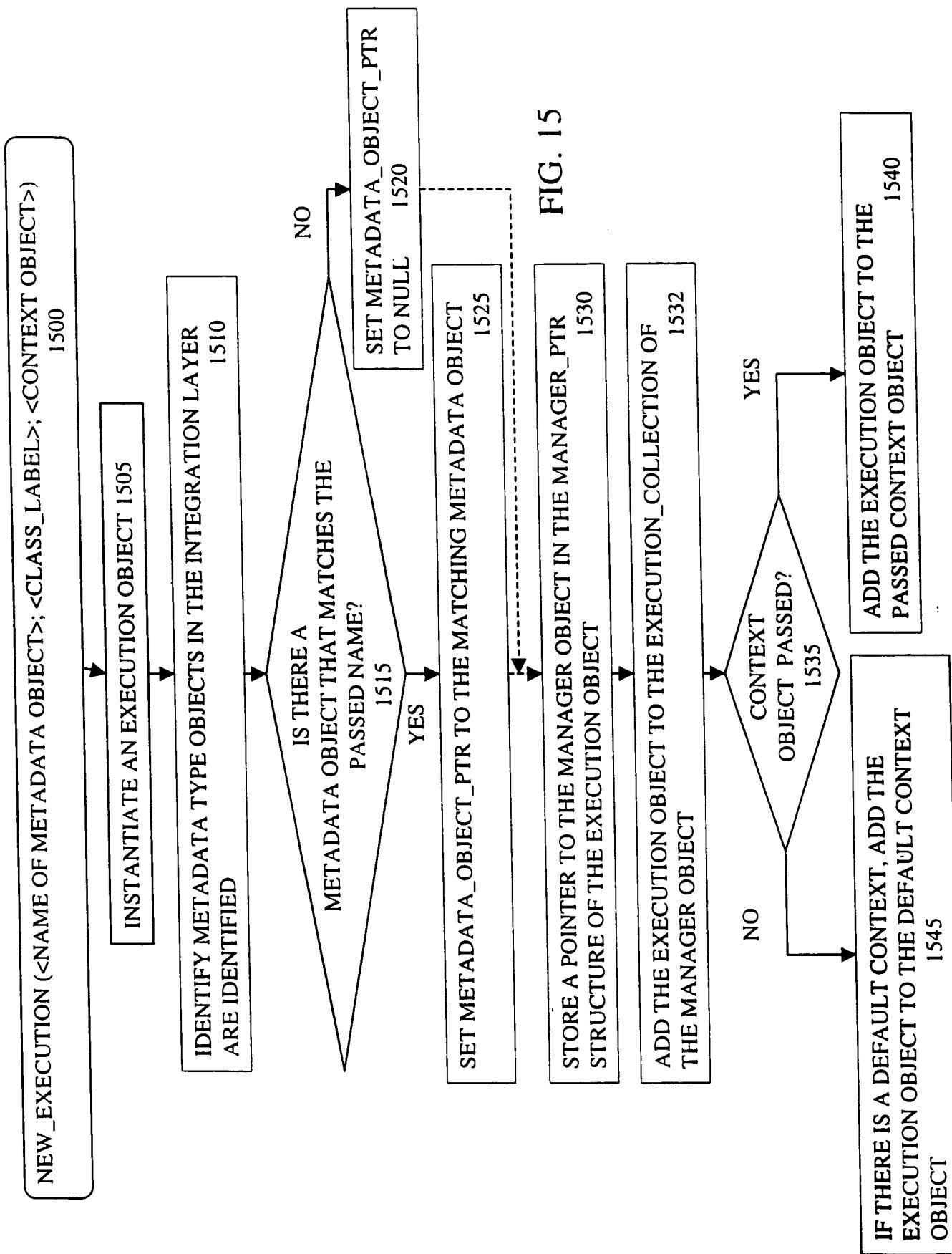


FIGURE 16

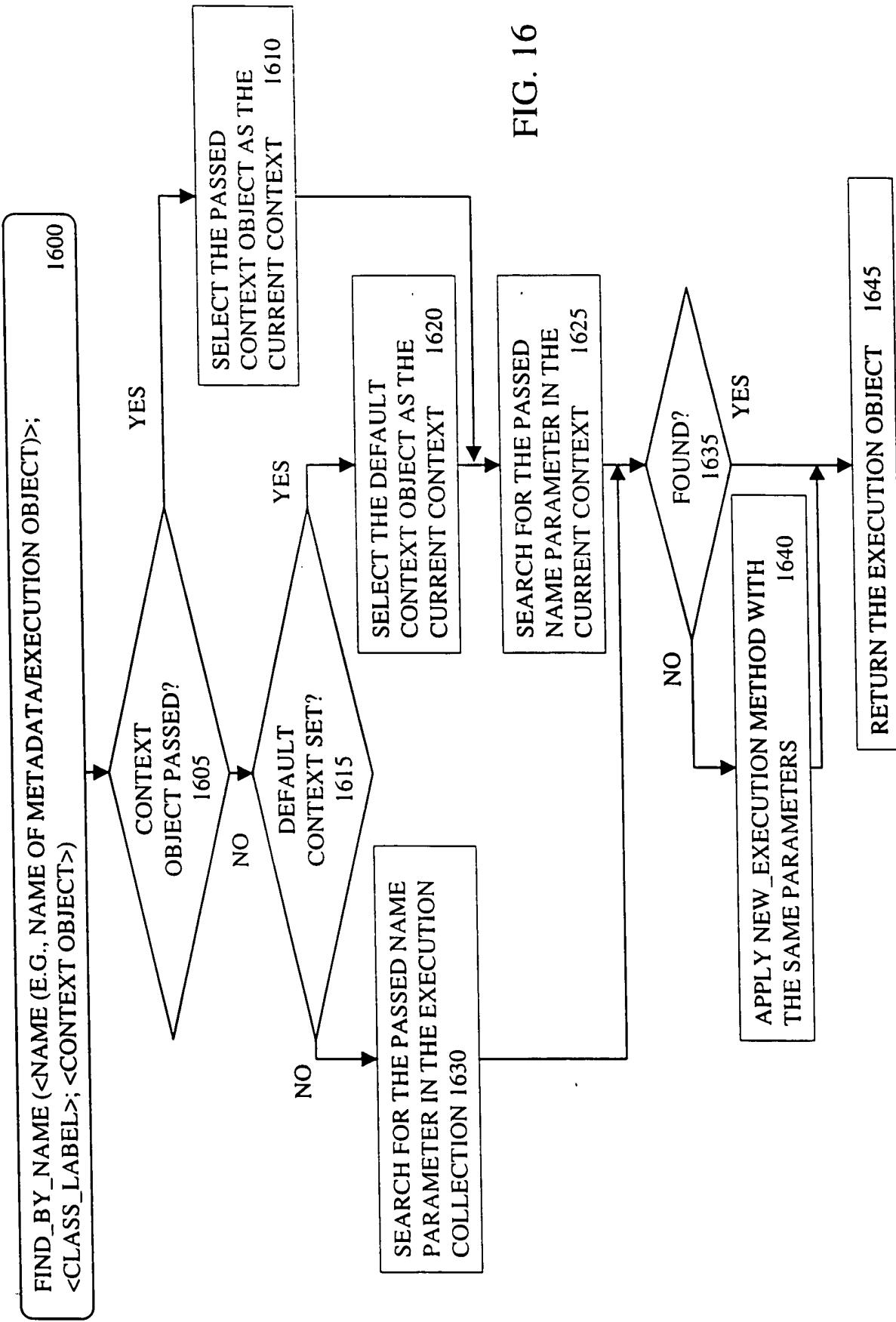


FIG. 16

FIGURE 17

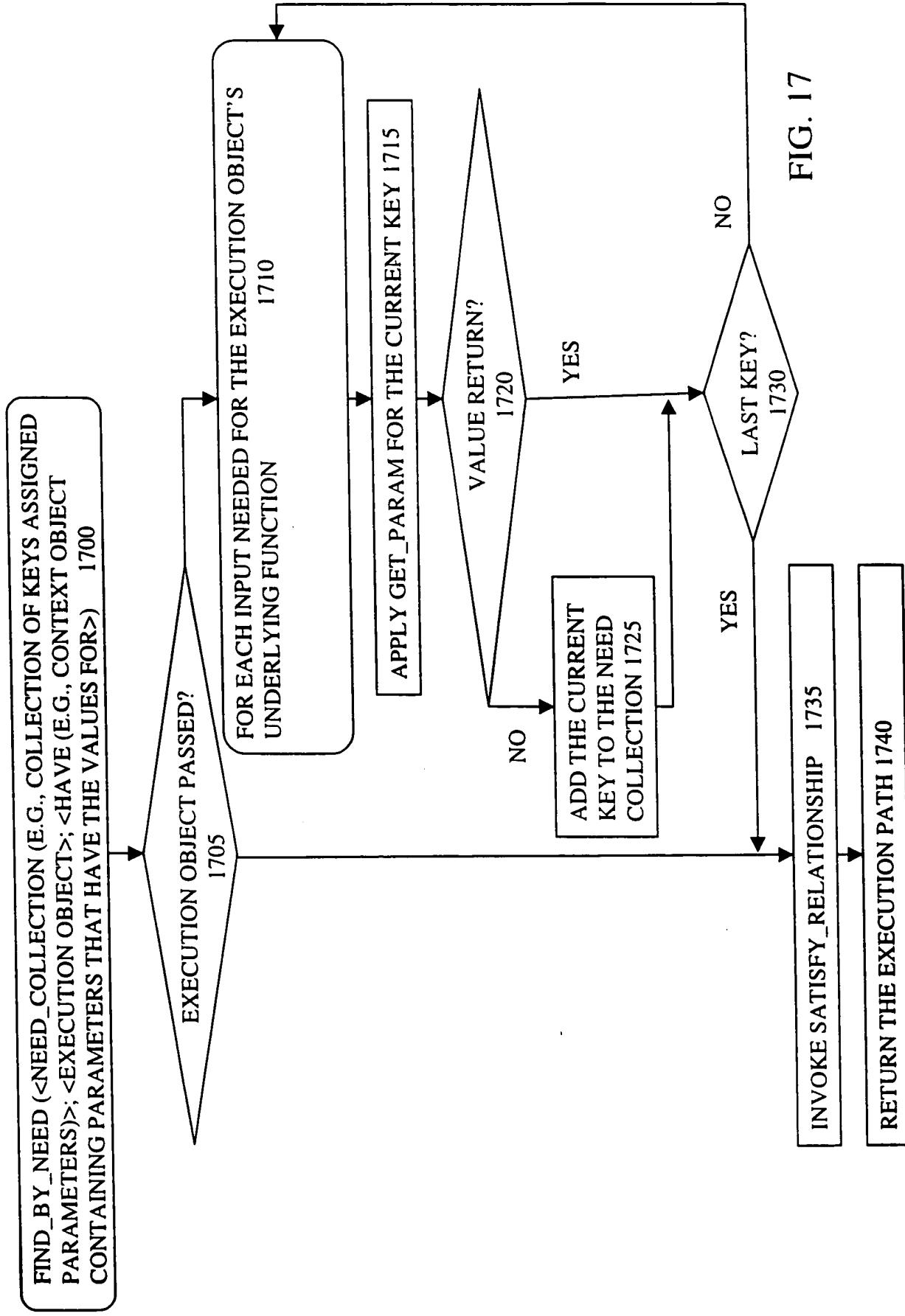


FIG. 17

FIGURE 18A

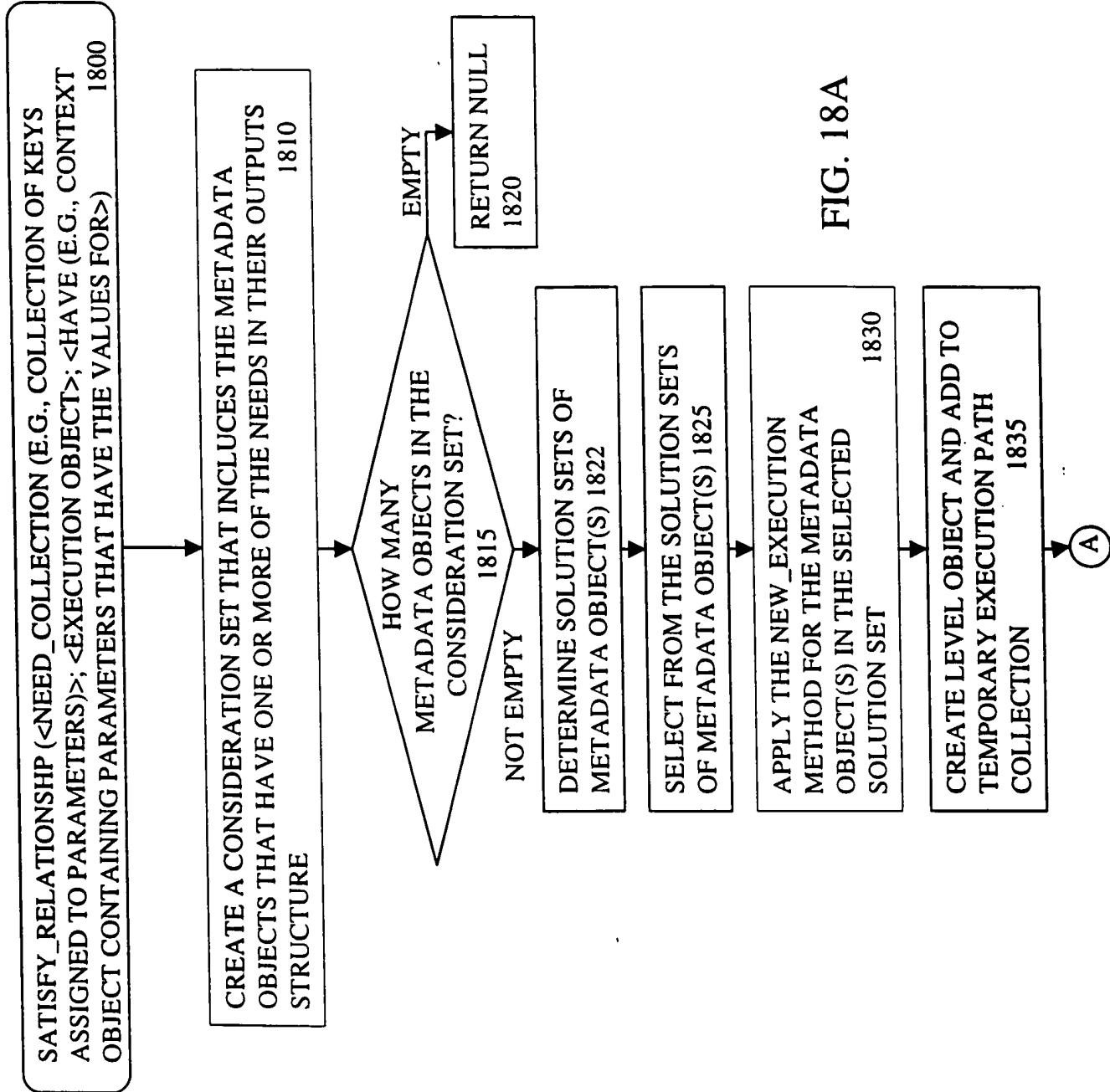


FIG. 18A

(A)

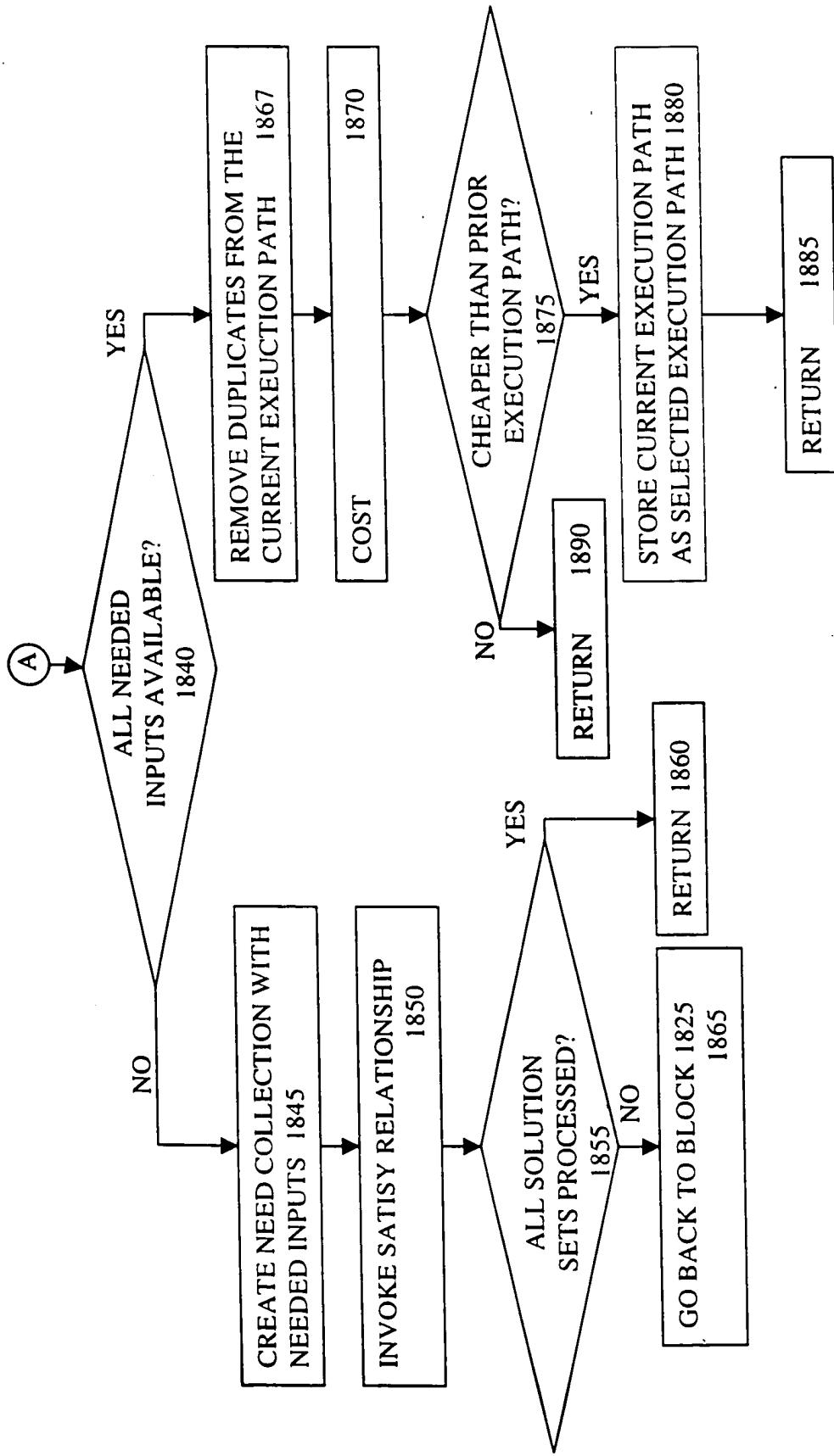
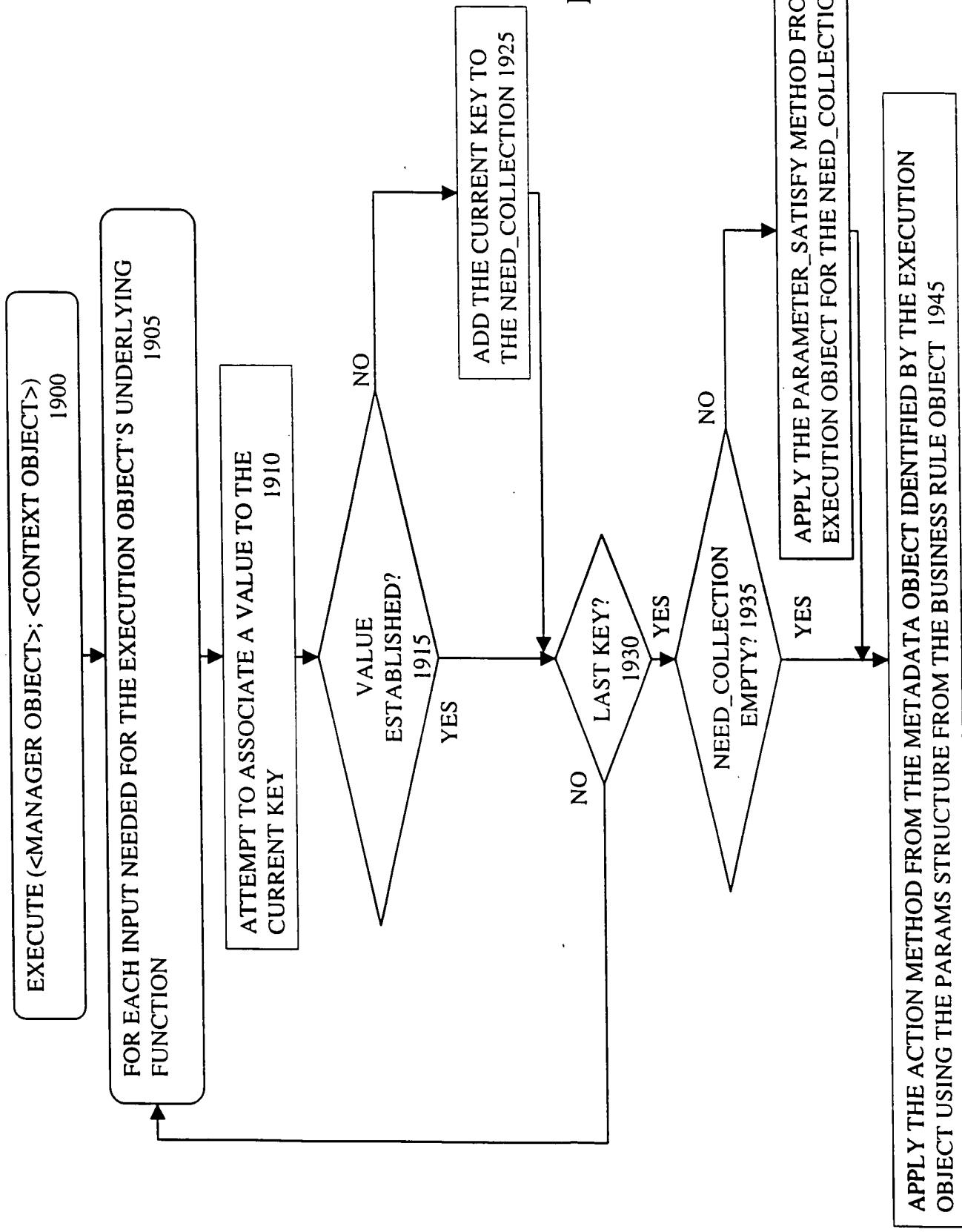


FIG. 18B

FIGURE 19



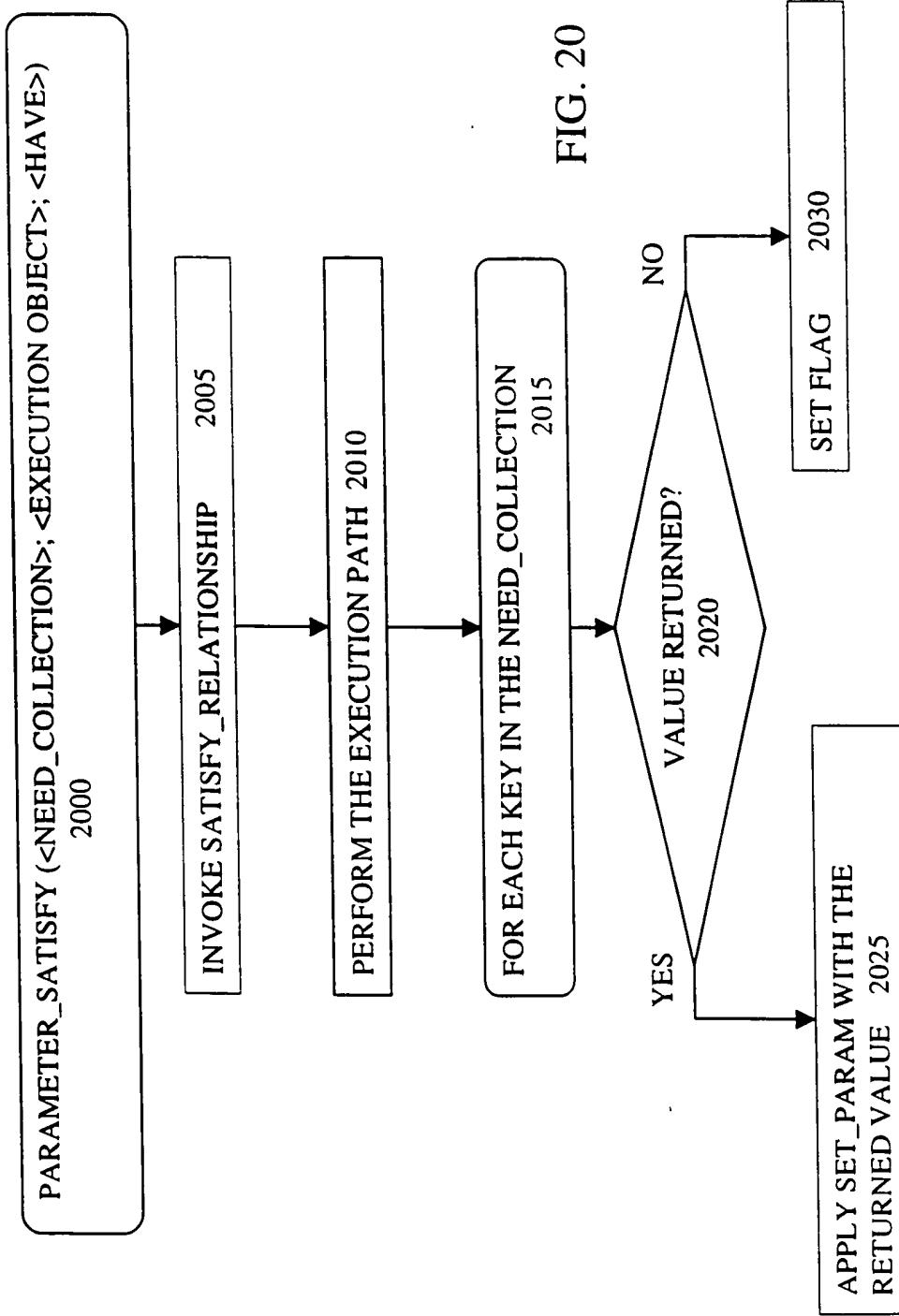


FIG. 20

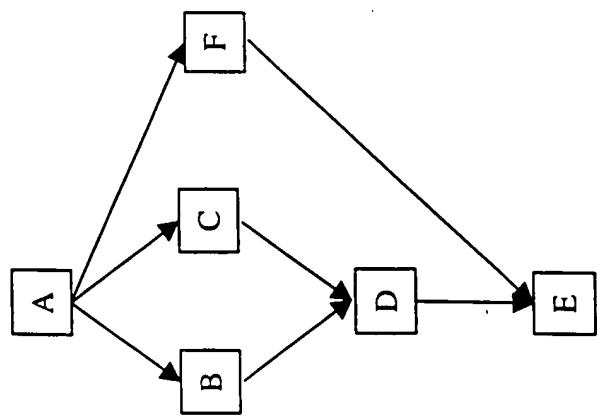


FIG. 21